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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/709,693

05/24/2004

RYAN THOMAS BECHARD

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3692

7590 09/25/2009  
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EXAMINER

SUERETH, SARAH ELIZABETH

ART UNIT

PAPER NUMBER

3749

MAIL DATE

DELIVERY MODE

09/25/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/709,693	<b>Applicant(s)</b> BECHARD, RYAN THOMAS	
	<b>Examiner</b> Sarah Suereth	<b>Art Unit</b> 3749	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 10 June 2009.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☐ Claim(s) 49-56 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 49-56 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

**DETAILED ACTION**

***Response to Amendment***

1. Receipt of applicant's amendment filed on 06/10/09 is acknowledged.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. **Claims 49-56** are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,156,139 to Wilson Jr. ("Wilson") in view of U.S. Patent No. 5,879,149 to Briggs ("Briggs") and U.S. Patent No. 3,865,185 to Otsbo ("Otsbo").

Wilson discloses in the specification and Figs. 1-4 a method of operating an oil burner and an oil burner assembly in the same field of endeavor as applicant's invention and similar to that described in applicant's claims.

In particular, Wilson shows an oil burner assembly having a manifold constructed of a unitary body of thermally transmissive material (see abstract), and having first (22) and second (14) passageways. As shown in Fig. 2, first passageway (22) extends from inlet (22a) to outlet (22b) and forms a continuous passageway (note flow arrows illustrated in Fig. 2 and col. 6, lines 29-31). As shown in Fig. 1, second passageway (14) is a straight, continuous path. Figure 1 also shows the two passageways having "separate" inlets and outlets. Wilson further shows that the first passageway (22)

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terminates in a first cavity (see enlarged exit cavity at left side of Fig. 2) wherein a portion of a nozzle (8) having an oil distribution port mounts in sealed engagement to the first cavity (note nozzle 8 is necessarily sealed so that flow is ejected from the central unnumbered port, see Fig. 1). Wilson also necessarily is connected to a source of oil so that oil is transmitted to passageway (22).

In regard to at least claims 53 and 50, Wilson shows an oil burner assembly having a manifold constructed of a thermally transmissive material (see abstract), first (22), second (14), and third (16) internal passageways, and a supported nozzle (8) having an oil distribution port and an atomizing port (see at least col. 2, lines 46-52). Source of oil and pressurized air are connected to the first (22) and third (16) passageways respectively and are arranged such that the air and oil are heated by a heating element arranged in the second passageway (14) (see col. 5, lines 47-48) before being discharged from the nozzle (8) (see at least col. 6, lines 28-42). The structural arrangement of the passageways, cavities and the nozzle ports are shown as recited in applicant's claims (see at least Figs. 1 and 2, and note second cavity 22B and first cavity consisting of the enlarged exit cavity of 22 and nozzle port 8). Each of the passageways, 16, 22, and 14 are separated from one another and accordingly considered to be located in separate tiers/layers.

Regarding claim 51, the undulations of passageway (22) (described also as a controlled labyrinth, see col. 6, line 60), are considered to represent the convoluted portions recited.

Additionally, note that each of the three channels (22, 14 and 16) are considered to be continuous as recited (see at least Figs. 1 and 2 and col. 6, lines 39-33).

In regard to at least claims 55-56, the method of operating an oil burner having the method steps recited in this claims are considered substantially disclosed in the operation of the burner assembly of Wilson as noted above.

Further, in regard to claim 55, as the air atomizing nozzle (8) of Wilson appears identical to the air atomizing nozzle (2) of applicant's invention, the function of the atomizing the oil immediately upon said oil being emitted from the nozzle is considered to suggested by the nozzle of Wilson.

Wilson does not explicitly show an igniter or step of igniting, the claimed nozzle configuration, or a source of heated liquid or providing such a source to the second passageway.

In regard to the recitation of an igniter and the claimed nozzle arrangement, the nozzle of Wilson is clearly indicated to create a flame (e.g. see abstract), however, there is no detail as to what effects the creation of a flame. However, it is well understood in the art that ignition is provided for the nozzle of an oil burner via an igniter mounted adjacent the nozzle exit. Support for this assertion is found in the reference to Briggs. Briggs teaches an oil burner assembly in the same field of endeavor as both applicant's invention and Wilson. In Briggs, the oil is ignited from a nozzle (52) via an adjacent igniter (55). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the igniter of Briggs in the burner of

Wilson to desirably ignite the fuel and air mixture as it is sprayed from the nozzle (see Briggs, col. 3, lines 55-60).

Regarding claims 52,54 and 56, the Wilson air supply passageway does not have the branched conduits as claimed.

Briggs teaches an oil burner with a nozzle (52) including a fuel conduit (126) terminating in a cavity (133) joined to an air conduit (140) including a narrowed region (142) that terminates in a first cavity (132). Both cavities are coaxial and arranged as claimed (see Figure 8).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Wilson apparatus by replacing the Wilson fuel nozzle arrangement with the Briggs fuel nozzle arrangement in order to use a low cost nozzle block arrangement (col. 3, lines 10-12).

The Wilson in view of Briggs apparatus shows only one narrowed air supply conduit, instead of the claimed plurality. However, the courts have held that duplication of parts for amplified effect does not distinguish over the prior art, unless a new and unexpected result is produced (*In re Harza*, 274 F.2d 669, 124 USPQ 378 (CCPA 1960) , also MPEP 2144.04).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Wilson in view of Briggs apparatus by inserting a plurality of air supply conduits, in order to increase the amount of air supplied to the nozzle head.

Wilson in view of Briggs, as discussed above, discloses the claimed invention except for the recitation in the claims of a source of heated liquid and step of providing the heated liquid to the second passageway. In Wilson, a passageway (14) is shown that receives a heating element but does not go into further detail as to the particulars of this heating element.

Otsbo discloses an oil to water (col. 3, lines 19-23 ) heat exchanger with flow through channels for hot water (52-55) used to preheating oil flowing through additional channels (60-65).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the oil heating device of Wilson to incorporate a heating means that uses water to preheat oil as taught in Otsbo to desirably provide a oil preheating device that has a very high heat transfer efficiency (see Otsbo, col. 1, lines 28-30).

Accordingly, a person of ordinary skill in the art would reasonably modify the heating element of Wilson to include a heated liquid passageway arrangement in the passageway structure (14) of Wilson to obtain the uniform oil heating benefit that, as noted above, is recognized in the art to result in good heat transfer efficiency.

### ***Response to Arguments***

4. Applicant's arguments filed 6/10/09 have been fully considered but they are not persuasive.

5. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

6. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., decreasing carbon deposition) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

7. Applicant's arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references.

8. Also, applicant argues that Ostbo is nonanalogous art because it relates to heating milk. While Ostbo does teach that the embodiment shown in Figure 1 is suitable for pasteurizing milk, Ostbo also teaches that the heater described in Figures 3 and 4 is designed to use heat from water to heat oil (col. 2, lines 42-45). Ostbo clearly teaches the benefits of using steam to heat oil in a pass through heat exchanger.

9. On page 4 of applicant's arguments, applicant argues that the prior art apparatus and the claimed invention serve to heat oil to the same temperature, but there are



“unexpected results” from the operation of the claimed invention. However, the examiner notes that such claims must be supported by evidence in the form of a declaration to be considered (see MPEP 716.01c). The examiner is not aware of evidence of record supporting these assertions.

**10.** In this case, the examiner considers Wilson to teach an oil heater including multiple passageways, one of which (14) receives an electrical heater. The examiner considers Briggs to disclose the claimed nozzle structure and igniter as part of an oil heater. The examiner also relies on Ostbo to teach the benefits of using a steam to oil heat exchanger for heating. Therefore, the examiner considers it to be obvious to modify the oil heater of Wilson to supply steam in the heating passageway (14) instead of a resistive element, because Ostbo teaches the benefits of using steam to heat oil in a flow through heat exchanger.

### ***Conclusion***

**11. THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sarah Suereth whose telephone number is (571)272-9061. The examiner can normally be reached on Mondays & Tuesdays 8:00AM-4:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steve McAllister, can be reached on (571) 272-6785. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Sarah Suereth/

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/Steven B. McAllister/

Supervisory Patent Examiner, Art Unit 3749